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Environmentally and socially responsible behaviour of Generation Z in the context of the economy of the common good

Agata Balińska

Department of Tourism, Social Communication and Counselling, Warsaw University of Life Sciences, Poland

e-mail: agata_balinska@sggw.edu.pl

ORCID: 0000-0002-8777-9955

Ewa Jaska

Department of Tourism, Social Communication and Counselling, Warsaw University of Life Sciences, Poland

e-mail: ewa_jaska@sggw.edu.pl

ORCID: 0000-0002-3874-1985

Agnieszka Werenowska

Management Institute, Social Communication and Counselling, Warsaw University of Life Sciences, Poland

e-mail: agnieszka_werenowska@sggw.edu.pl

ORCID: 0000-0002-2545-4442

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Abstract: The aim of the presented study was to analyse environmentally and socially responsible behaviour of Generation Z in the context of the economy of the common good. The main reasons for the choice of such issues were related to unfavourable climate change and the increasing participation of Gen Z in social, economic and political life. The specific character of this generation makes the common good and its conscious management correspond to a greater extent than ever before with the model proposed by Ostrom and Felber. The phenomenon of the common good is not sufficiently recognised. The study used the analysis of domestic and foreign literature as well as the results of the authors' own empirical research. A questionnaire was carried out on a sample of 838 respondents from Generation Z (Zoomers) in 2023. The collected material was subjected to quantitative and qualitative analysis. An innovative methodological solution was the use of an original index of environmentally

and socially responsible behaviour. According to the study, the value of this index changes depending on the socio-demographic variables of the respondents. The research fills a knowledge gap (analysis of environmentally and socially responsible behaviour) and a methodological gap (its own indicator).

Keywords: index of environmentally and socially responsible behaviour, Generation Z, economy of the common good

1. Introduction

The discourse on the common good dates back to the times of ancient Greece, and the first thinker who proposed this idea was Plato, also interested in the good itself (from the Greek word agathón). He claimed that "the term agathón is composed of two words: agastós meaning 'something admirable' and thoón meaning 'something quick'. As a whole, these should be understood as something that unexpectedly and quickly enraptures us [...] something that suddenly attracts us" (Skowroński 2020, p. 206).

The common good "can be defined as the sum of resources and the community that uses and creates them at the same time, and a set of social protocols, i.e. norms and rules by which and thanks to which a given community manages and uses the good" (Bochno 2019, p. 222). It is, therefore, based on practical self-management, resource management and decent living. On the other hand, Skowroński (2020) emphasised that in social philosophy, the common good is one that simultaneously serves the development of the entire community and its members. According to Piechowiak (2008, p. 26), the common good is "the sum of the conditions of social life enabling and facilitating the integral development of all members of the political community and the communities created by them". This was confirmed by Bollier's (2014) approach, where the common good is the sum of a common resource and a set of norms and rules for managing it. Thus, as suggested by Prandecki (2016), the use of the common good is limited only to members of a given community, which partially explains the possibility of excluding certain individuals from consumption.

Milewska (2020) listed the following features of the common good: widely available and free of charge, meeting collective needs (on a local, regional or national scale), equality in obtaining (sharing), lack of competition among consumers (an additional person will not increase the costs for those who have used or still use this good).

A categorisation of goods according to the level of competitiveness in consumption and the possibility of exclusion from it is illustrated in Table 1.

Table 1. Categorisation of foods

Description		Possibility of exclusion from consumption	
		YES	NO
Competitiveness in consumption	YES	Private	Common
	NO	Civic	Public

Source: own research based on Jakubowski (2012), p. 43.

While the features distinguishing the common good from the civic or private good are intuitive and obvious, it should be noted that the difference between the common good and the public good results from the lack of competition in the consumption of the latter. An example of a public good is, for example, national defence, which is equally vested in all citizens.

The term 'common good' is also used in the Polish Constitution (Art. 1. Chapter 1, see Konstytucja Rzeczypospolitej Polskiej 1997), "The Republic of Poland is the common good of all citizens". While this raises the importance of the term, it does not define it. Młynarska-Sobaczewska (2009) stated that this

is a normative term, but its meaning is difficult to reconstruct, whilst even the more difficult it is to try to find certain regularities in its application.

The common good as a subject of scientific consideration has been analysed by exponents of various fields and disciplines of science. First of all, the law, where the category of the common good is addressed in relation to: the constitution and Roman law, the science of culture and religion (Dutkiewicz et al. 2021; Zawadzka-Pąk 2019), political science and sociology (Wierzchosławski 2023), andragogy (Bochno 2019), architecture and urban planning (Wiszniowski 2019), natural sciences (Skowroński 2020, Blicharz 2017), philosophy (Pacewicz 2006), including Catholic thought, in particular Thomism (Toso 2019). Although the perspective of the Catholic religion treats the common good as global or universal, however, as Lusawa noted, this term can also be applied to a country, region, local community and even a family (Lusawa 2017, p. 20). This approach was also indicated by other researchers, e.g. Słodowa-Hełpa (2015), whilst Ciechelska (2020, p. 17682) emphasised that "common goods combine an economic category related to goods and their value, and a social category that determines this value".

According to Bollier (2014, p. 15), "the path to understanding the common goods requires willingness to think in practical terms, to notice the creative potential of social relations and to give up the search for abstract universal and predictable 'truths'. The common good works because people learn and experience management in a specific and unique way based on a given resource. They work together and love this forest, this lake or this piece of farmland. The essence here is the personal relationship between people and their resources." Wiszniowski (2019, p. 21) also stressed that "trust, openness and willingness to cooperate are needed to properly care for the common good".

These examples are only a small part of scientific considerations on the common good and the principles of its management.

The importance of the common good was also evidenced by the fact that in 2009, Ostrom – one of the researchers of this phenomenon – was honoured with the Nobel Prize in Economics. In her opinion, the element that distinguishes the common good from other goods is social supervision over this good, which means that the common good should be defined through processes, not an objective criterion (Prandecki 2016, p. 60). Therefore, the aim of the presented study was to analyse and measure environmentally and socially responsible behaviour in the area of managing the common good.

2. Theoretical bases and hypothesis

The subject of the analysis in this article is the economics of the common good, classified as normative economics (Lusawa 2017). In characterising the assumptions of the economy of the common good (ECG), Felber (2014, pp. 168-190) pointed to the following elements:

1. ECG is based on the same values as human relations (cooperation, respect, trust, solidarity). These relations are the basis of satisfaction and motivation to act.
2. Motivation systems in the economy should be constructed in such a way that people strive for the common good and cooperation, not for maximising benefits and building a competitive advantage.
3. At the macro level, GDP should not be a measure of success, but the "product of the common good". At the micro level, the financial balance should be replaced by an ECG balance reflecting the pro-social, ecological and democratic operation of enterprises.
4. Enterprises with a good ECG balance should receive legal and financial privileges (e.g. lower taxes).
5. The financial balance should be an intermediate balance, i.e. the financial profit should be a means (tool) enabling the implementation of the new mission of the company (contribution to the common good). The financial surplus cannot be used for competitive purposes.
6. The lack of competition will allow companies to maintain an optimal size without fear that they will be bought out, taken over or excluded from the market.

7. Lack of competition will make the market dominated by small enterprises that will cooperate with each other, share knowledge, know-how, orders, etc.
8. Limits on income and property diversity will be established by democratic discussion. The maximum and minimum amount of income, assets and even inheritance that can be taken over should be set. Surpluses should be passed on as a 'democratic dowry' to future generations.
9. In large enterprises, employees and the public should have the right to vote and hold the status of co-owners. The government should not have voting rights in public enterprises.
10. Entities operating in the field of public services (education, health, social life, mobility, energy, communication) should function as 'democratic communities' where both employees and communities share ownership and decision-making powers.
11. An important democratic community should be the Democratic Bank.
12. The ECG balance of enterprises should be taken into account in international trade.
13. Nature should be treated as property in itself, not private property. Leasing of land for construction, agriculture or other purposes may take place after meeting environmental protection requirements.
14. The goal should not be economic growth but the reduction of the ecological footprint of people, businesses and countries at a global and sustainable level. "The freedom to choose a lifestyle ends where the freedom of other people to choose the same lifestyle, or simply to lead a dignified existence is limited" (Felber, p. 189).
15. Working time should be gradually reduced (even to 30 hours a week), which will allow employees to find time for family life, personal development, education, social and political activities. This will make lifestyles less consumer-centric and more socially and environmentally sustainable.
16. After every ten years of work there should be a year off, financed from basic income
17. Representative democracy should be supported by direct and participatory democracy, thanks to which those sovereign will have a permanent direct influence on important processes in the state.
18. The assumptions of the ECG should be refined during a broad discussion.
19. Education should be oriented towards the common good, which requires the introduction of science about feelings, values, communication, experiencing nature, etc. into the education system.
20. Managers should be expected to possess socially responsible characteristics, hence they should be not only competent but also compassionate and empathetic.

The assumptions of Felber's ECG, quoted briefly, raise various doubts. They are a combination of Marxism with Thomism – the common good treated as universal and global Francis (2020) and even with Judaism. Point 16 refers to szmita, which is recorded in the Book of Exodus (Exodus 23:10-11), "for six years you will sow the land and gather its produce, and on the seventh year you will let it lie fallow and not harvest it, so that the poor of your people may eat, and the rest will be eaten by the wild animals. This is what you will do with your vineyard and your olive garden" (Biblia 2014). Felber believed that this is not a mature concept, and the assumptions of the ECG should be developed as part of a wider discussion. This study assumes that this concept is 'on the way', the introduction of all the assumptions proposed by Felber in the countries of Western culture may never come true. Nevertheless, in the authors' opinion, for the implementation of environmental and social benefits, it is worth disseminating the very term 'common good' and promoting activities that will make limited natural resources and human well-being being used consciously and protected to a greater extent. It should be noted that Felber's approach is reflected in many places in the 'economy of the bagel' developed by the English economist Raworth (2017), criticising the currently dominant economic system that degrades the natural and social environment. Hickel (2020) made a similar statement, seeing the genesis of the destructive impact of man on the environment, e.g. in rejecting animism and adopting the dualism already propagated by Plato and Descartes. As a result, for centuries, mankind has treated the Earth as a 'warehouse' of materials, resources that they have the right to subjugate and use in a predatory way (Hickel, 2020). The author also pointed out that ecological and sustainable solutions are often created to the detriment of the natural environment, and that 'green growth' is not 'green'.

The ECG was also referred to in the document of the European Economic and Social Committee, where it was declared that “the core of the ECG model is the assumption that the economy should serve people, i.e. the common good. The ECG is based on the values that all people consider universal: human dignity, solidarity, environmental sustainability, social justice, transparency and democratic engagement” (see Recent evolutions of the social economy in the European Union, 2017).

Gorynia (2022, p. 103) used the term ‘economy of moderation’, which in his opinion should concern moderation in:

- exploiting the environment – e.g. taking into account the requirements of the green economy or circular economy,
- creating negative consequences for the climate,
- energy consumption,
- the use of non-renewable resources,
- consumption in general (in the background, consumerism is sometimes confused with overconsumption, i.e. consumption above real needs or even greedy consumerism versus sustainable consumption),
- inequalities,
- budgeting at the state level – the issue of the size of public debt and its passing to the next generations,
- household expenses,
- the waste of various products, which we are the perpetrators of.

Gorynia combined the concept of ‘economy of moderation’ with sustainable development and the concept of ‘good’ globalization. The correlations between ECG and sustainable development were also indicated by Van der Waal and Thijssens (2020), and Samuelson’s proposed terminology should also be mentioned here, namely “collective consumption goods” (Samuelson 1954).

Unfortunately, both the common and public good (the relationship between the common and the public good is not the subject of analysis in this study, this was discussed in more detail by, among others, Prandecki 2016; Jakubowski 2012; Brelik 2015) are overexploited – we all feel the economic, ecological and social consequences of this every day. There are questions about how to manage goods to limit their excessive exploitation. Nobel laureate E. Ostrom, analysing the use of the common goods, including those of fisheries and forestry stated that "there is little evidence to support the thesis that simply transferring common property to local users helps to avoid their over-exploitation" (Ostrom 2012, p. 93). The earlier study by Ostrom (1990) also showed that the depletion of common resources largely depends on the behaviour of the community that uses them, including the exchange of information, co-organization of activities or adjustment of rules for using shared resources. The use of nature as a good cannot be based on unlimited liberal freedom, but must be subordinated to minimising social inequalities and improving the difficult situation of people and entire nations living in poverty and in undignified social or natural conditions (Skowroński 2020, Słodowa-Hełpa 2015).

In the context of the discipline of economics, it is impossible not to mention another winner of the Nobel Prize in Economics in 2014, namely J. Tirole (2018) and his book *Economics for the Common Good*, which has not yet been translated into Polish.

Bollier’s approach (2014, p. 131) should also be quoted, according to which the common good is “a social system of long-term care of resources, protecting the common values and identity of the community. A system of self-organization through which communities manage resources (renewable and non-renewable) with minimal or no state and market involvement. The self-organization mentioned by Bollier is increasingly being supported by new media, including social media and mobile apps. They support the integration of people with similar views, value systems and/or lifestyles, used to a greater extent by young consumers, for whom virtual space is a natural area of functioning. Barnes (2006) also emphasised that the use of common goods is limited only to members of a given community.

Jamka (2014) referred 'community' to Gen Y, and stressing their proficiency in new technologies, teamwork orientation, attitude towards change, ease of establishing relationships and other strengths, saw them as 'agents of change' towards ECG. This is a very interesting approach, as the role of Generation Z, i.e. people born after 1995, is growing in the social and economic space (Lyons et al. 2015), therefore this focused on that generation. Numerous arguments support this choice: it is a generation experiencing unfavourable climate change, manifesting its commitment to environmental protection (e.g. the Youth Climate Strike), efficiently moving in the world of new media, and increasingly often declaring the need for development outside of professional work.

Moreover, the Deloitte report (Global 2022 Gen Z & Millennial Survey 2022) showed that Gen Z is highly sensitive to environmental problems. The report also demonstrated that as many as 75% of respondents agreed with the statement that the world is at a turning point, especially when it comes to climate change; nine out of ten admitted that they take actions to protect the environment, such as buying second-hand clothes and organic food.

Due to the fact that the Internet and free access to its various resources and solutions, including mobile apps, is perceived by some researchers (Bollier 2014) in terms of the common good, the next assumption adopted in the research was the use of mobile apps by the so-called Zoomers to support environmentally and socially responsible behaviour.

The findings indicate the need to continue research on the economy of the common good, taking into account current social and economic processes. Ostrom (2000) also wrote that "empirical and theoretical work in the future needs to ask how a large array of contextual variables affects the processes of teaching and evoking social norms; of informing participants about the behaviour of others and their adherence to social norms; and of rewarding those who use social norms, such as reciprocity, trust, and fairness." According to Reid et al. (2010), there is a need to study behavioural changes towards responsible development and to use innovations for this purpose. In the research results presented below, an attempt was made to fit into the above-mentioned cognitive needs. The method of measuring environmentally and socially responsible behaviour was treated as a methodological innovation, and the analysed mobile apps as a social innovation in the sense of their functions stimulating responsible consumption.

The research results presented below are a response to this need. In order to organize the study process, the following hypotheses were defined:

H1. Environmentally and socially responsible modes of behaviour are stimulated to a greater extent by economic factors than by concern for the common good.
H2. The TooGoodToGo app is an important determinant of creating environmentally and socially responsible behaviour.
H3. The socio-demographic variable that differentiates the analysed behaviour to the greatest extent is gender.
H4. Environmentally and socially responsible behaviour is counterchecked by the value of the indicator.

The hypotheses defined in this way prompted the authors to conduct surveys and develop an original measure in the field of environmentally and socially responsible behaviour.

3. Research methodology

The research process was carried out in accordance with the stages presented in Table 2.

The survey questionnaire was prepared on the webankieta platform. The survey link was made available through the Internet from December 2022 to March 2023. A suitable selection of respondents was used (Etikan 2016), together with the snowball method in the distribution of the questionnaire (Jabłońska and Sobieraj 2013). The authors employed filtering questions (in terms of age

verification and application use), single-choice and multiple-choice closed questions, and a five-point scale to assess the importance of specific behaviour in caring for the natural and social environment and the assessment of own activities in the analysed areas. The choice of the modes of behaviour (Table 3) for the research resulted from the analysis of secondary data and the authors' previous research in this area (Balińska et al. 2021, Jaska et al. 2022). The ranking of individual behaviour and the respondents' self-assessment were used to calculate the index of environmentally and socially responsible behaviour. The construction of the index was based on the methodology of the customer satisfaction index (CSI), which is often used in scientific research (Woźniak and Zimon 2016, Skowron 2010, Pukas 2015, Przybytniowski 2019, Dudziak et al. 2022, German and Cabacungan 2021).

Table 2. Stages of research implementation

Stage	Scope
1	Selection of research topics
2	Analysis of secondary data (desk research method)
3	Development of the assumptions of the Environmentally and Socially Responsible Behaviour Index (ESRBI)
4	Choosing the scope and method of organizing primary research (questionnaire, ESRBI)
5	Development of the survey questionnaire
6	Evaluation of the correctness of the research tool – pilot studies
7	Revision of the survey questionnaire
8	Realization of relevant research
9	Quantitative and qualitative analysis of the collected material
10	Calculation of the ESRBI indicator
11	Development of the study results

Source: own study.

The Environmentally and Socially Responsible Behaviour Index (ESRBI) was calculated using the following formula:

$$ESRBI = \sum_{i=1}^{N} W_i C_i \quad (1)$$

where *ESRBI* – the degree of environmentally and socially responsible behaviour, *i* – consecutive number of the studied behaviour, *N* – number of modes of behaviour specified in the analysis, W_i – importance factor of *i*-th behaviour, and C_i – self-assessment of the respondent of *i*-th behaviour.

The obtained results can be analysed in absolute values, but this would make it difficult to compare the results with other studies that may be carried out in the future, and their authors would use a different range of the scale. This problem was pointed out in the study by Yadav et al. (2023); when analysing the research carried out using various scales, they indicated that a percentage scale is a good solution. Therefore, as in the case of the CSI methodology (Wolniak and Skotnicka-Zasadzień 2008; Woźniak and Zimon 2016), a percentage scale was used using analogous threshold values (in CSI, the following were adopted: 0-40% as very bad, 40-60% bad; 60-75% average; 75-90% good; 90-100% a very good) (cf. Frąś, 2014; Woźniak and Zimon 2016), and the interpretation is presented in Table 3.

The categories 'responsible' and 'very responsible' should be interpreted as information about conscious management of the common good. It is also justifiable to treat them (especially 'very responsible') as agents of change. Assuming Felber's approach (the necessity to improve the discussion process), the ranges indicated in Table 2 are only a proposal and an invitation to a scientific discussion.

Note that the proposed indicator is only one of the measures of environmentally and socially responsible behaviour, and in the authors' opinion it is only an element of broader interdisciplinary research. It was assumed, following Goodhart's law, that when "an indicator begins to be treated as a goal it ceases to be a good indicator" (Clear 2019, p. 186). Therefore, the specific objective of this study was to estimate the adopted indicator and submit it to the assessment of other researchers.

Table 3. Interpretation of ESRBI results

Index value (%)	Interpretation	Recommendations
0–40.0	Very irresponsible	Recognising of the reasons for the lack of environmentally and socially responsible behaviour. Intensive informative, education and activities supporting desirable behaviour.
40.1–60.0	Irresponsible	Determining of the level of knowledge on the human impact on the natural and social environment. Multi-directional informative, education and activities supporting desirable behaviour.
60.1–75.0	Moderately responsible	Broader formal and informal education, creating and consolidating responsible behaviour.
75.1–90.0	Responsible	Supplementing knowledge and stimulating behaviour in those areas that require correction.
90.1–100	Very responsible	Strengthening positive behaviour and involvement in promoting them in the everyday environment and on social media.

Source: own study.

The obtained dataset was analysed statistically. The values of the examined parameters were presented using the mean value, median value and standard deviation. The Mann-Whitney test was performed to compare the results. The significance level of $p < 0.05$ was adopted, indicating the existence of statistically significant differences and relationships.

4. Research results

A total of 844 respondents participated in the survey. After survey, six incorrectly completed questionnaires were rejected, which means that the sample included in the study was 838 respondents, most of whom (61.1%) were women, 36.5% men, and 2.4% did not indicate their gender. The dominance of women in surveys is typical, which was also noted (Mulder and de Bruijne 2019).

The respondents represented the age range of 14-28 years; only 34 (4.1%) were younger. Their place of residence varied, i.e. in cities with more than 500,000 inhabitants (33.3%), in rural areas (33.1%), in cities up to 50 thousand inhabitants (22.8%), and the remaining 10.9% in cities with 50,000 to 500,000 inhabitants. Almost half of the respondents (56%) lived in a single-family house, 38.2% in a block of flats, and only 5.8% indicated a boarding school. Almost half lived on money received from their parents and other family members, which is natural because some of the respondents were minors, and even adult offspring were usually supported by their parents until finishing their education. Almost every fourth respondent (23.3%) indicated that they derived their income from permanent employment, and 22.2% from commissioned work. Just for 5.1% the main source of income were scholarships and/or student social benefits, whilst for 1.4% social benefits (e.g. pension). The largest share (46.7%) was made up of respondents who spent up to PLN 1,500 on their living expenses, and one-third (33.8%) indicated the amount of PLN 1,500-3,000, and 19.6% over PLN 3,000.

Due to the assumption that the element connecting the respondents, apart from age, is the use of apps supporting socially and environmentally responsible behaviour (a filtering question in the questionnaire), they were asked which apps they used at least once a month (Figure 1).

Most of the respondents used the OLX and Vinted apps, i.e. those that cover a wide range of activities (sales, buying, giving away for free) and are promoted in traditional media; “Gdzie wyrzucić” (Where to throw away) and “Zdrowe zakupy” (Healthy shopping) were used least.

The main subject of research interest was the verification of environmentally and socially responsible behaviour by the respondents. In the first part of the questionnaire, they referred to each mode of behaviour listed in Table 3, specifying their importance on a scale of 1-5 (from “definitely low” to “definitely high”). Next, the respondents were asked to rate their behaviour on the same scale.

For the purpose of calculating the ESRBI indicator, the descriptive scale was converted into a digital one. The average assessment of the importance of individual behaviour in the context of care for the natural and social environment, the assessment of own behaviour in these areas, and the value of the ESRBI index are presented in Table 4.

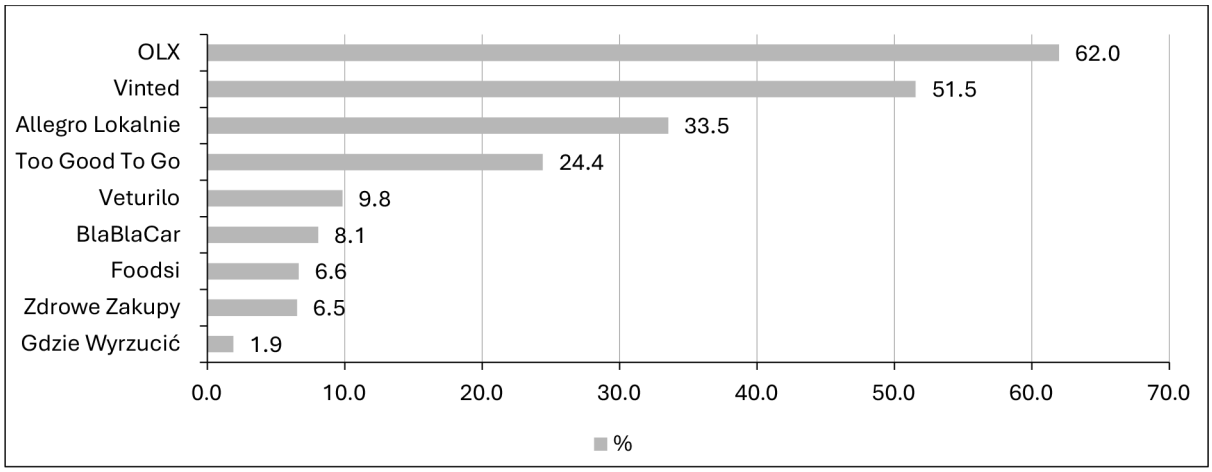

Fig. 1. Apps used by the respondents (in %) – one could indicate more than one answer

Source: own study.

Table 4. Significance and assessment of environmentally and socially responsible behaviour and ESRBI value

	Specification	Significance of behaviour (average)	Weights	Evaluation of behaviour (average)	Weighted result
1	waste sorting	4.34	4.56	3.72	0.17
2	saving water	4.54	4.77	3.69	0.18
3	reduction of meat consumption	2.77	2.91	2.48	0.07
4	donation and/or collection of items from foodsharing units	3.37	3.54	1.77	0.06
5	disconnecting devices with a charged battery from the power supply	3.5	3.68	3.48	0.13
6	giving away unused clothes	3.86	4.06	3.35	0.14
7	switching off light	4.41	4.63	4.34	0.20
8	use of ecological/biodegradable washing and cleaning agents	3.45	3.62	2.57	0.09
9	use of renewable energy sources	4.39	4.61	2.88	0.13
10	sealing windows and building insulation	4.07	4.28	3.45	0.15
11	using biodegradable and recycled packaging	4.16	4.37	3.26	0.14
12	using energy saving light bulbs	4.21	4.42	3.97	0.18
13	organic food	3.22	3.38	2.73	0.09
14	zero-waste departments in stores	3.63	3.81	2.61	0.10
15	re-usable fruit/vegetable bags	4.35	4.57	3.19	0.15
16	ecological certificates for textiles	3.23	3.39	2.47	0.08
17	FAIRTRADE markings on products	3.31	3.48	2.39	0.08
18	using of second-hand clothes	3.86	4.06	2.99	0.12
19	apps serving to save food and donate clothes, toys	4.09	4.30	2.75	0.12
20	buying products of domestic producers	3.62	3.80	3.36	0.13
21	reduced purchasing activity	3.37	3.54	3.13	0.11
22	purchase of equipment with energy efficiency classes taken into account	3.77	3.96	3.21	0.13
23	using public transport instead of car	3.93	4.13	3.40	0.14
24	cycling instead of using a car	4.00	4.20	2.94	0.12
25	shared transport (BlaBlacar, city bikes)	3.74	3.93	2.48	0.10
	Total	95.19	100		3.11
	ESRBI	62.14%			

Source: own study.

The respondents indicated as the most important for the care of the natural and social environment behaviour in the following areas: waste segregation, saving water, switching off the light, using renewable energy sources and reusable bags when buying fruit and vegetables, as confirmed by other studies (Balińska et al. (2021), Parzonko et al. (2021), Tarapata (2020)). These are primarily the modes of behaviour leading to cost reduction and resulting from legal regulations, e.g. waste segregation. However, according to Tapia-Fonllem et al. (2013) this type of pro-ecological behaviour of young people indicates significant links not only with saving, but also with altruistic and fair behaviour, which is in the interest of the common good.

In turn, according to the respondents, the least impact on the natural and social environment resulted from the reduction of meat consumption (the only behaviour whose importance was rated below 3), which is in contradiction with the data (e.g. Tischner 2018). The respondents assessed their own behaviour in this area even lower (2.48). The research by Borusiak and Kucharska (2020) also showed that young consumers had divergent opinions on the impact of meat production on the environment (42% agreed with the statement "I am convinced that meat production is harmful to the environment").

The respondents assessed their own behaviour in all the analysed areas lower than the importance of these modes of behaviour, among which switching off the light was rated highest and it was the only one they rated above 4 on average. The lowest score was given to their own activity in the field of acquiring or returning articles from/to the food sharing units (average 1.77), where the greatest difference was noted between the assessment of the importance of such behaviour for environmental protection and their own behaviour (difference of 1.6 points, Pearson's $r = 0.253$). In contrast, the smallest difference related to disconnecting devices with a charged battery from the power supply (0.02) and switching off the light (0.07).

The respondents assessed their behaviour in terms of using shared transport and travelling by bicycle as low. As indicated by Hsu et al. (2018), and Cerutti et al. (2019), these are activities that benefit not only the user but also the natural and social environment. Reducing purchasing activity was assessed as medium (3.37 as significant for the environment and 3.13 as an assessment of own behaviour). Meanwhile, Tarapata (2020) showed that this behaviour was quite often indicated (67%), whereas the relatively low interest in purchasing fair-trade products by respondents was also confirmed by Tarapata (2020), with 9.1% indicating that they purchase such products.

The value of the indicator (62.14) indicates that the respondents belonged to the group of 'moderately responsible', so their involvement in the management of the common good is limited and they do not meet the condition of being 'agents of change' towards the ECG.

The authors' subject of interest was also to verify the diversification of the indicator value depending on the socio-demographic variables of the respondents and the most frequently used apps (only those used by at least a quarter of the respondents were included) (see Table 5).

Apart from the male respondents and the small group of people living in a dormitory/ boarding school, the value of the indicator was in the range of 60-75, i.e. 'medium responsibility'. The highest ESRBI values were achieved in the group of females and those using the TooGoodToGo app.

Factors stimulating environmentally and socially responsible behaviour were also important from the point of view of the research (Table 6).

The economic factor had the greatest impact on environmentally and socially responsible behaviour, and this was confirmed by other studies (e.g. Jaska et al. 2022). The role of this factor has been growing recently due to the macroeconomic situation (Gruszczyński 2023). The respondents also rated non-economic reasons quite highly, and their simultaneous occurrence with economic ones was also indicated by others (Jaska et al. (2022); Thurston (2013); Cohen et al., (2016) and Reichl et al., (2021)).

Table 5. ESRBI values depending on socio-demographic variables and apps used

Specification		ESRBI value
Gender	Women	64.0
	Men	59.1
Place of residence	Village	61.9
	Cities up to 50,000	61.4
	Cities from 50,000 to 500,000	62.4
	Cities over 500,000	62.8
Form of residence	Flat in a block of flats	62.7
	Single-family house	62.1
	Dormitory/boarding school	50.0
Source of income	Contract work	62.6
	Permanent work	61.6
	Scholarship/benefits	61.6
	Pocket money from family	62.0
Amount of income	Up to 1500	62.2
	1500-3000	62.9
	Above 3000	60.7
Most used applications	Vinted	64.2
	OLX	62.6
	Allegro Lokalnie	62.6
	TooGoodToGo	66.9

Source: own study.

Table 6. Factors influencing pro-ecological and pro-social behaviour of the respondents (5-definite influence, 1-no influence)

Factors	Average	Median	Standard deviation
Saving money	3.96	4	1.10
Care for the natural environment	3.82	4	1.05
Willingness to help others	3.73	4	1.11
Saving time	3.65	4	1.14
Concern for future generations	3.64	4	1.19
Because parents do it	3.12	3	1.21
Legal regulations	3.09	3	1.11
My friends do the same	2.95	3	1.16
I have apps that help me with this	2.76	3	1.36

Source: own study.

The important role of altruistic factors (defined in the study as “willingness to help others”) was confirmed by Bechtel et al. (2017, p. 1): “reciprocal and altruistic people are about 10 percentage points more supportive of global climate policy”. Capiene et al. (2021) also emphasised that pro-environmental and pro-social consumer involvement begins with changes in purchasing decisions and leads to building social bonds. Skowroński (2020, p. 210) also found that the category of the common good indicates the obligations of the community towards its members and the need for cooperation.

In accordance with the adopted issues, the importance of individual factors was tested depending on socio-demographic variables (see Table 7).

Table 7. The average importance of individual factors in stimulating environmentally and socially responsible behaviour depending on socio-demographic variables

Factors	Gender		Place of residence						Main source of income				Available amount in PLN		
	Women	Men	Village	Cities up to 50M	Cities from 50M to 500M	Cities of above 00M	Block	House	Commissioned work	Permanent employment	Scholarship/ Benefits	From parents	Up to 1500	1500-3000	Above 3000
A	3.9	4.0	4.0	3.9	3.8	4.1	4.0	3.9	3.9	4.0	4.1	3.9	3.9	4.0	3.9
B	3.7	3.6	3.7	3.7	3.6	3.6	3.6	3.7	3.5	3.6	3.9	3.7	3.6	3.7	3.6
C	3.1	3.0	3.1	3.1	3.0	3.1	3.0	3.1	3.0	3.1	3.0	3.1	3.1	3.1	3.1
D	3.2	3.1	3.3	3.0	3.0	3.1	3.0	3.2	3.0	3.1	2.9	3.3	3.2	3.1	3.0
E	3.0	2.8	3.1	2.9	3.0	2.8	2.9	3.0	2.9	3.0	2.8	3.0	3.0	2.9	2.9
F	3.0	2.4	2.7	2.7	2.9	2.8	2.9	2.6	2.7	2.8	3.0	2.7	2.7	2.9	2.6
G	4.0	3.6	3.8	3.7	3.9	3.9	3.9	3.8	3.7	3.8	3.7	3.9	3.9	3.9	3.6
H	3.9	3.5	3.7	3.8	3.9	3.6	3.7	3.8	3.7	3.7	3.5	3.8	3.7	3.9	3.5
I	3.8	3.4	3.7	3.6	3.8	3.6	3.7	3.7	3.7	3.6	3.2	3.7	3.6	3.7	3.5

Key: A) Saving money, B) Saving time, C) Legal regulations, D) Because my parents do it, E) My friends do the same, F) I have apps that help me with this, G) Care for the environment, H) Willingness to help others, I) Concern for future generations

Source: own study.

The importance of the economic factor was also reflected in Table 7. This was not most important just for females, respondents from cities with a population of 50,000 to 500,000, and for those with the lowest income level and living mainly on money received from the family, it was as important as care for the natural environment. Concern for the environment was significantly more important for female respondents (Mann-Whitney test $U = 3.567$ at $p = 0.00036$, statistically significant result at $p < 0.05$). This was confirmed by the studies of Brécard et al. (2009) and Saboya de Aragão and Alfinito (2021), which show that environmental issues are more important for women than for men. The following were more important for females: having an app supporting appropriate behaviour ($U = 4.47912$, $p = 0.00001$), willingness to help others ($U = 3.62325$, $p = 0.0003$) and concern for future generations ($U = 2.4772$, $p = 0.01314$). Such an app was more important also for residents of blocks of flats rather than for single-family houses ($U = 3.49957$, $p = 0.00046$). Concern for the environment was less important for those who had an income of more than PLN 3,000 than for those whose income was PLN 1,500-3,000 ($U = 2.23126$, $p = 0.02574$) or up to PLN 1,500 ($U = 2.23126$, $p = 0.02574$). For those with an income of PLN 1,500-3,000, the willingness to help others was significantly more important than for those with at least PLN 3,000 ($U = 2.31898$, $p = 0.02034$). The willingness to help others and care for the natural environment were assessed by the respondents regardless of the socio-demographic variables, perceived as moderately significant (rating range 3.2-3.9).

Many studies (e.g. Meloni et al. 2019) indicated that residents of large cities, to a greater extent than those in small towns and villages, declared socially and environmentally responsible behaviour, which resulted from many factors. Among them were greater accessibility to such solutions as a city bike system, food sharing, personal experience of the negative impact of various sectors of the economy on the environment. The analysed modes of behaviour also fell within the concept of a smart city (Cerutti et al. 2019). Such a relation was not confirmed in this research.

The importance of individual factors was also tested in relation to the apps most frequently used by the respondents (see Table 8).

Table 8. The importance of individual factors depending on the app used (average)

Factor	Vinted N=435	OLX N=523	ToGoodTooGo N=206	Allegro lokalnie N=283
Saving money	4.0	4.0	4.1	3.9
Time saving	3.7	3.6	3.8	3.7
Legal regulations	3.1	3.1	3.1	3.0
Because parents do it	3.2	3.1	3.2	3.2
My friends do the same	3.1	2.9	3.1	3.0
I have apps that help me with this	3.1	2.7	3.5	2.6
Care for the environment	3.9	3.8	4.0	3.8
Willingness to help others	3.9	3.7	3.8	3.7
Care for future generations	3.7	3.6	3.8	3.6

Source: own study.

At the average level, the biggest difference was noted for the factor "I have apps that help me with this". This factor was rated the highest by the respondents using the TooGoodToGo app (shopkeepers, restauranteurs, bakers, vendors and manufacturers who offer products with a short shelf life at attractive prices). The respondents using this app rated significantly higher than non-users the importance of having the app as a factor stimulating environmentally and socially responsible behaviour (Mann-Whitney U test $U = 7.0013$ at p-value = 0.00001; the result is significant when $p < 0.05$).

5. Conclusion

The assessment of the importance of individual behaviour in the context of care for the natural and social environment (common good) was quite diverse. The respondents rated water saving activities highest, and reducing meat consumption lowest. Interestingly, they assessed their own behaviour in the analysed areas lower than their importance, and the difference was lowest in the case of giving away or obtaining products from the food-sharing units. The economic factor had the greatest impact on environmentally and socially responsible behaviour among the respondents, and thus the first hypothesis was confirmed. Concern for the environment and willingness to help others, i.e. factors falling into the category of the common good, were ranked next. In the case of the factor "I have apps that help me", TooGoodToGo apps were ranked highest as a significant determinant of environmentally and socially responsible behaviour, which confirmed the study's second hypothesis.

Socio-demographic variables had a limited impact on the significance of the analysed factors, with the gender of the respondents being a significantly differentiating variable, in accordance with the third hypothesis.

For the purposes of the study, it was proposed to measure environmentally and socially responsible behaviour using the ESRBI index, an innovative methodological solution, and although its construction is not new (based on CSI), the analysis of scientific databases (e.g. Scopus, ProQuest) showed that so far no assessment of environmentally and socially responsible behaviour has been made using the indicator proposed by the authors. The obtained values are reflected in the partial results, which should be treated as an indication of the usefulness of ESRBI, thus confirming hypothesis 4. The proposed indicator was treated as a methodological test that should be improved while at the same time subjecting the proposed interpretation to discussion.

Unfortunately, the presented results indicate that despite declarations in the media, numerous social initiatives, including the Youth Climate Strike, Open Cages and others, environmentally and socially responsible behaviour is limited, and altruistic factors (care for the environment, future generations, etc.), although important, lose out to economic ones.

Due to the fact that the research sample was selected in a non-random manner, it is not justified to say that Generation Z functions more in the mechanism of the 'tragedy of the commons' than in those of managing the common good. Although Bochno (2019) came to a similar conclusion, her research was qualitative in nature and concerned "dean groups", i.e. more formalised structures that pursue analogous goals at the same time and space. Nevertheless, the presented results were confirmed by the research (albeit narrower) by other authors and allowed for the formulation of the conclusion that it is beneficial for the natural environment and society to promote the idea of the common good. The authors agree with the postulate of Gorynia (2022, p. 103) that although the economy of the common good seems to be a purely theoretical construct, a kind of utopia, "there must be room in the public debate for categories that may seem like utopias, ideals without cover, with ideal types detached from life. It is about the need to move away from only short-term, ad hoc, under pressure and short-term thinking, focused only on solving current problems. The archetypes of such categories constitute the concepts of the common good and global rationality."

The presented research led the authors to formulate the following conclusions:

1. There is a need for cyclical interdisciplinary research on environmentally and socially responsible behaviour falling within the area of common good management.
2. Effective management of the common good requires simultaneous consideration of economic and altruistic factors. It is beneficial to link them with an efficient information and promotion system, e.g. a mobile app.
3. Research on the economy of the common good should be extended with new methods of measurement.
4. Campaigns promoting sustainable behaviour in rural areas and smaller towns should be stepped up.

The presented research is not free from limitations:

1. Although a wide range of behaviour (25 items) was adopted for the purposes of verification, whose selection was a consequence of previous research experience, the changing situation means that this list should be verified in subsequent studies.
2. The size of the sample and its non-random selection do not allow to draw conclusions of a general nature.
3. The research was conducted only among Polish users of mobile apps.

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